

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA5 | Northolt Corridor

Baseline (SV-002-005)

Sound, noise and vibration

November 2013

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Department
for Transport

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Contents

1	Introduction	1
1.1	Structure of the sound, noise and vibration appendices	1
1.2	Existing acoustic environment	1
2	Scope, assumptions and limitations	3
2.1	Sound and vibration sensitive receptors	3
2.2	Local engagement	3
2.3	Existing baseline sound monitoring locations	3
3	Environmental baseline	4
3.1	Existing baseline data collection methodology	4
3.2	Existing baseline sound levels	4
3.3	Future baseline methodology	18
4	References	19

List of tables

Table 1: Existing baseline sound levels	6
Table 2: Data source coding key	17

1 Introduction

1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Northolt Corridor area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-005) (this appendix);
 - construction sound, noise and vibration (Volume 5: Appendix SV-003-005); and
 - operational sound, noise and vibration (Volume 5: Appendix SV-004-005).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.
- 1.1.5 No baseline vibration data has been gathered in this area. This is considered appropriate as few receptors are likely to be subject to significant sources of existing vibration; and given the absolute nature of the current guidelines for assessment of the effects of vibration these provide a more stringent basis for assessment of likely effect than relative criteria based on changes in vibration.

1.2 Existing acoustic environment

- 1.2.1 The Northolt Corridor area is subject to a wide range of sound sources including road traffic, trains, aircraft, industrial and commercial operations, domestic and community activities.
- 1.2.2 The existing baseline sound environment consequently varies considerably from location to location, dependent upon the nature and setting of local sound sources. At a large number of locations, however, the sound of road traffic on the A40 Western Avenue and, to a lesser extent, London Underground trains (the Central Line runs over ground in this area) is dominant.
- 1.2.3 The route is entirely in a tunnel through this area and therefore the existing baseline sound assessment is focused around the ventilation and intervention (vent shafts) at Westgate, Greenpark Way and Mandeville Road.
- 1.2.4 In the area around the Westgate vent shaft, the sound environment is dominated by the sound of road traffic on the A40 Western Avenue and other nearby roads (daytime

sound levels are typically 75dB¹ for properties near the A40 Western Avenue and 60dB for properties off Westgate. Sound from trains on the London Underground Central Line also contributes, but is generally not the dominant source.

- 1.2.5 The main sound sources in the area surrounding the Greenpark Way vent shaft are trains running on the nearby London Underground Central Line and local road traffic. Daytime sound levels in this area are typically 50 to 55 dB for properties on Greenpark Way and Conway Crescent. Sound from nearby commercial and industrial activities is also audible in some locations.
- 1.2.6 In the vicinity of the Mandeville Road vent shaft the main sound sources are traffic on the A312 Mandeville Road and trains on the London Underground Central Line. Daytime levels are typically 50dB to the rear of properties on Carr Road and 50 to 55dB to the rear of properties on Belvue Road.
- 1.2.7 Night-time sound levels² across the area are typically around 5dB lower than the daytime. The night-time sound environment continues to be characterised by road traffic.

¹ Quoted dB values at residential areas refer to the equivalent continuous sound level, $L_{pAeq,16hr}$

² Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level, $L_{pAeq,8hr}$.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within this area, 168 assessment locations have been defined to represent identified sound sensitive receptors within a spatial scope of 300 metres from the perimeter of the boundary of the vent shaft site. The assessment locations are shown on the detailed maps in Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

2.2 Local engagement

- 2.2.1 Discussions have been held with representatives of The London Borough of Ealing regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.
- 2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and reported in this document.
- 2.2.3 Officers of The London Borough of Ealing were invited to attend baseline sound measurements and witness the measurement procedures used in the Council's district, however, no council officers accepted these invitations.
- 2.2.4 Local engagement through community forum meetings has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

- 2.3.1 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in the Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

3 Environmental baseline

3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the Northolt Corridor area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
 - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
 - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 A total of 129 baseline measurements were undertaken in this CFA, see section 3.1.5 for clarification.
- 3.1.4 In the area of the proposed Green Park, West Gate and Mandeville Road vent shafts, seven day unattended baseline sound monitoring were undertaken at four, one and four locations respectively; with further satellite short term measurements undertaken at a large number of locations throughout the area. Long term measurements were undertaken either at residential noise sensitive properties, or in nearby locations where baseline sound levels were representative of those at surrounding properties. The satellite measurements were undertaken simultaneously with the longer duration monitoring to allow good correlation between the two sites. The satellite measurements were made at a wide range of publically accessible locations where sound levels were representative of those at nearby sensitive receptors. Measurements were made at each satellite monitoring location at several times of the day and night.
- 3.1.5 Please note that during the initial phase of the baseline sound collection exercise the Proposed Scheme through the Northolt Corridor area was at surface level. The Proposed Scheme assessed is now in tunnel. Therefore a number of initial baseline sound measurements were completed at locations where it subsequently became clear they would no longer be likely to experience any airborne sound effects as the route would be in a tunnel. This report has therefore focussed on baseline sound levels at assessment locations around vent shaft locations as they are the only possible source of airborne sound from the Proposed Scheme in this area, consequently this report does not cover baseline sound levels at locations further from the vent shafts.

3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- For the operational sound assessment
 - $L_{pAeq,16hr \text{ weekday}}$ daytime (07:00-23:00) sound pressure level;

- $L_{pAeq,8hr\,weekday}$ night-time (23:00-07:00) sound pressure level;
- arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
- highest $L_{pAFmax,5min}$ night-time sound pressure level.
- For the construction sound assessment
 - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and
 - night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).

3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.

Appendix SV-002-005

Table 1: Existing baseline sound levels

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
434454	Belvue Road, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
434826	Badminton Close, Northolt	LM0010	57.4	56.1	64.0	74.0	57.7	56.5	56.1	3,A,i,a
435453	Eastcote Lane North, Northolt	LM2021	61.0	56.6	65.3	85.0	60.4	59.7	57.1	2,A,iii,b
436084	Eastcote Lane, Northolt	LM1040	56.5	52.5	62.8	72.8	56.8	55.6	52.5	1,A,ii,b
436788	Eastcote Lane, Northolt	LM5001	48.1	44.5	54.6	68.1	48.4	45.5	43.9	1,A,ii,b
436843	Moat Farm Road, Northolt	LM5002	51.6	44.4	60.5	64.5	52.2	49.2	44.4	4,A,i,a
436911	Moat Farm Road, Northolt	LM0034	51.2	47.3	52.4	76.2	51.2	49.9	47.3	1,A,ii,b
436955	The Farmlands, Northolt	LM0034	51.2	47.3	52.4	76.2	51.2	51.3	47.3	1,A,ii,b
436990	Eastcote Lane, Northolt	LM2031	51.8	47.8	54.1	68.1	51.6	48.8	47.1	1,A,i,a
437006	Eastcote Lane, Northolt	LM1040	56.5	52.5	62.8	72.8	56.8	55.6	52.5	1,A,i,a
437295	Eastcote Lane North, Northolt	LM1040	56.5	52.5	62.8	72.8	56.8	55.6	52.5	1,A,i,a
439011	Moat Farm Road, Northolt	LM0081	47.7	48.5	53.1	84.8	48.0	48.6	48.5	1,A,i,a
439060	Moat Farm Road, Northolt	LM0026	53.4	49.4	61.0	75.0	53.2	50.4	48.7	3,A,ii,b
439125	Eastcote Lane, Northolt	LM5001	48.1	44.5	54.6	68.1	48.4	45.5	43.9	1,A,ii,b
443814	Gonville Crescent, Northolt	LM7000	47.4	39.3	53.2	57.9	48.0	45.1	39.3	4,A,i,a
444511	Carr Road, Northolt	LM0011	61.1	57.8	63.1	74.5	61.9	58.6	57.8	3,A,i,a

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
444786	Ribblesdale Avenue, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
444818	Ribblesdale Avenue, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
445054	Mandeville Road, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
445544	Haydock Avenue, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
445810	Southwell Avenue, Northolt Mandeville	LM7004	56.6	52.6	69.5	79.5	56.9	55.7	52.6	3,A,i,a
445957	Thirsk Close, Northolt	LM7003	55.5	51.5	62.0	72.0	55.8	54.6	51.5	3,A,i,a
446020	Lewes Close, Northolt	LM2033	56.9	52.5	59.6	77.7	57.9	54.6	52.9	3,A,iii,b
446045	Lewes Close, Northolt	LM2033	56.9	52.5	59.6	77.7	57.9	54.6	52.9	3,A,iii,b
446195	Brighton Drive, Northolt	LM0013	56.1	52.1	72.1	82.2	56.4	55.2	52.1	3,B,iii,b
446256	Tenby Gardens, Northolt	LM0028	64.4	58.6	70.5	80.6	64.7	63.5	58.6	3,A,ii,b
446336	Sussex Crescent, Northolt	LM0028	64.4	58.6	70.5	80.6	64.7	63.5	58.6	3,A,ii,b
446467	Sussex Crescent, Northolt	LM1203	53.4	49.0	56.0	74.2	53.5	52.4	48.5	1,A,iii,b
446575	Goodwood Drive, Northolt	LM1040	56.5	52.5	62.8	72.8	56.8	55.6	52.5	1,A,ii,b
446636	Mandeville Road, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
446718	Carr Road, Northolt	LM0045	48.9	42.4	49.0	64.7	49.2	48.5	42.2	1,A,ii,b
446771	Mandeville Road, Northolt	LM0045	48.9	42.4	49.0	64.7	49.2	48.5	42.2	1,A,ii,b
446802	Badminton Close, Northolt	LM0010	57.4	56.1	64.0	74.0	57.7	56.5	56.1	3,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
446905	The Farmlands, Northolt	LM0025	51.5	47.1	55.5	75.2	50.9	50.2	47.6	3,A,ii,b
447489	Carr Road, Northolt	LM0045	48.9	42.4	49.0	64.7	49.2	48.5	42.2	1,A,ii,b
447779	Castle Road, Northolt	LM2010	44.6	41.3	45.2	56.6	45.4	42.1	41.3	1,A,ii,b
447965	Castle Road, Northolt	LM2011	58.2	54.9	59.5	70.9	59.0	55.7	54.9	3,A,i,a
448150	Oriel Way, Northolt	LM0031	60.4	57.2	62.5	74.0	61.2	58.0	57.2	3,A,ii,b
448156	Summit Road, Northolt	LM0054	49.1	45.5	53.3	80.3	49.2	49.4	44.2	1,A,ii,b
448166	Cherry Gardens, Northolt	LM0012	57.2	48.3	56.9	68.4	58.0	54.7	48.3	3,A,ii,b
448225	Belvue Road, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
448236	Carr Road, Greenford Green	LM0012	57.2	48.3	56.9	68.4	58.0	54.7	48.3	3,A,ii,b
448262	The Farmlands, Northolt	LM0022	56.8	62.7	69.1	100.8	57.2	57.8	61.0	3,A,i,a
448364	The Farmlands, Northolt	LM0024	64.0	62.1	71.3	81.3	64.3	63.1	62.1	3,A,ii,b
448387	The Farmlands, Northolt	LM0022	56.8	62.7	69.1	100.8	57.2	57.8	61.0	3,A,ii,b
448471	Moat Farm Road, Northolt	LM2021	61.0	56.6	65.3	85.0	60.4	59.7	57.1	2,A,ii,b
448512	Eastcote Lane, Northolt	LM0022	56.8	62.7	69.1	100.8	57.2	57.8	61.0	3,A,iii,b
448571	Eastcote Lane, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
448898	Fort Road, Northolt	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
449201	Belvue Road, Northolt	LM0021	60.7	56.3	66.0	84.2	60.8	59.7	55.8	3,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
449307	Belvue Close, Northolt	LM0024	64.0	62.1	71.3	81.3	64.3	63.1	62.1	3,A,ii,b
449326	Belvue Close, Northolt	LM0024	54.0	52.1	71.3	81.3	54.3	53.1	52.1	3,B,ii,b
449395	Belvue Road, Northolt	LM1203	53.4	49.0	56.0	74.2	53.5	52.4	48.5	1,A,ii,b
449510	Sandringham Road, Northolt	LM0021	60.7	56.3	66.0	84.2	60.8	59.7	55.8	3,A,ii,b
449663	Ealing Road, Northolt	LM0024	54.0	52.1	71.3	81.3	54.3	53.1	52.1	3,B,ii,b
450037	Uneeda Drive, Greenford	LM2023	52.9	49.2	48.9	74.0	52.9	52.0	48.7	3,C,ii,b
450387	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,ii,b
450440	Ingram Way, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,ii,b
450581	Uneeda Drive, Greenford	LM2004	62.0	59.4	69.7	91.2	63.2	58.8	58.9	3,A,i,a
450630	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,ii,b
450737	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
450829	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
450881	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
450918	Greenford Road, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
457997	Oldfield Lane North, Greenford	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
458360	Carr Road, Northolt	LM0032	61.5	58.2	65.0	76.4	62.3	59.0	58.2	3,A,ii,b
465196	Priory Gardens, London	LM1029	62.3	59.4	66.6	80.6	61.4	64.4	57.8	3,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
465447	Marsh Road, Wembley	LM0060	59.9	58.4	66.7	78.5	60.0	58.3	57.1	1,A,iii,b
466197	Conway Crescent, Perivale	LM2027	54.1	47.4	46.1	68.4	54.2	52.9	47.0	3,A,iii,b
466333	Priory Gardens, London	LM1029	62.3	59.4	66.6	80.6	61.4	64.4	57.8	3,A,ii,b
468141	Conway Crescent, Perivale	LM2026	53.6	46.9	49.3	71.6	53.7	52.4	46.5	1,A,i,a
468197	Conway Crescent, Perivale	LM2026	53.6	46.9	49.3	71.6	53.7	52.4	46.5	1,A,ii,b
468256	Conway Crescent, Perivale	LM2027	54.1	47.4	46.1	68.4	54.2	52.9	47.0	3,A,ii,b
468372	Bennetts Avenue, Greenford	LM2023	53.5	49.2	48.9	74.0	53.5	52.6	48.7	3,C,iii,b
468461	Bennetts Avenue, Greenford	LM2002	54.7	50.1	60.5	76.2	54.9	57.9	50.7	4,A,ii,b
468555	Bennetts Avenue, Greenford	LM2002	54.7	50.1	60.5	76.2	54.9	57.9	50.7	4,A,ii,b
468612	Middleton Avenue, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
468689	Bennetts Avenue, Greenford	LM2002	54.7	50.1	60.5	76.2	54.9	57.9	50.7	4,A,ii,b
468821	Downing Drive, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
468920	Downing Drive, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
469145	Lyon Way, Greenford	LM7030	53.0	46.6	53.7	68.6	53.4	54.4	47.6	1,A,ii,b
469314	Rockware Avenue, Greenford	LM7030	53.0	46.6	53.7	68.6	53.4	54.4	47.6	1,A,ii,b
470441	Medway Drive, Perivale	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
470517	Medway Drive, Perivale	LM1062	54.2	49.4	54.1	68.9	54.7	53.5	49.8	3,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/ weekend L _{pAeq}	Night-time L _{pAeq}	
470982	Woodhouse Avenue, Perivale	LM1042	53.4	49.6	55.1	70.4	53.5	53.0	50.0	1,A,ii,b
471067	Woodhouse Close, Perivale	LM1013	52.1	45.4	46.5	68.8	52.2	50.9	45.0	3,A,i,a
471199	Conway Crescent, Perivale	LM1062	54.2	49.4	54.1	68.9	54.7	53.5	49.8	3,A,iii,b
471341	Tees Avenue, Perivale	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
471507	Medway Drive, Perivale	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
473135	Conway Crescent, Perivale	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
473420	Conway Crescent, Perivale	LM2027	54.1	47.4	46.1	68.4	54.2	52.9	47.0	3,A,ii,b
473492	Conway Crescent, Perivale	LM2026	53.6	46.9	49.3	71.6	53.7	52.4	46.5	1,A,ii,b
473529	Conway Crescent, Perivale	LM2026	53.6	46.9	49.3	71.6	53.7	52.4	46.5	1,A,ii,b
473584	Middleton Avenue, Greenford	LM2022	52.5	49.9	53.1	74.6	52.6	48.2	48.3	1,A,iii,b
481104	Brunswick Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
481180	Brunswick Road, Hanger Hill	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b
481355	Brunswick Road, London	LM0005	76.8	73.9	81.9	93.7	76.4	76.4	73.3	3,A,iii,b
481448	Greystoke Park Terrace, London	LM0005	76.8	73.9	81.9	93.7	76.4	76.4	73.3	3,A,ii,b
481685	Alpertown Lane, Wembley	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
482519	Brunswick Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
483045	Kingfield Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
483269	Mulgrave Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
484182	Brunswick Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
484199	Fowlers Walk, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
488860	Burns Road, Wembley	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
491973	Hanger Lane (North Circular Road), Hanger Hill	LM1032	77.7	74.8	85.5	99.4	78.3	81.2	74.7	3,A,ii,b
491989	Ritz Parade, London	LM1035	69.9	67.0	78.5	90.4	69.6	69.6	66.4	4,A,ii,b
492009	Royal Parade, London	LM1035	69.9	67.0	78.5	90.4	69.6	69.6	66.4	4,A,ii,b
492044	Abbey Parade, London	LM2017	72.1	69.2	78.7	92.7	71.9	74.8	68.3	3,A,i,a
492062	Rossall Crescent, London	LM1031	64.3	57.7	74.3	88.3	64.9	67.8	57.7	3,A,ii,b
492074	Twyford Abbey Road, London	LM1031	64.3	57.7	74.3	88.3	64.9	67.8	57.7	3,A,ii,b
492095	Twyford Abbey Road, London	LM7050	53.3	50.4	55.6	69.5	53.9	56.8	50.3	1,A,ii,b
492296	Norbreck Gardens, London	London_Urban	64.0	56.0	71.1	75.0	64.0	60.0	56.0	7,A,iii,b
492325	St. Annes Gardens, London	LM7050	53.3	50.4	55.6	69.5	53.9	56.8	50.3	1,A,ii,b
493240	Brunswick Road, London	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b
493270	Brunswick Road, London	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b
493318	Brunswick Road, London	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b
493368	Brunswick Road, London	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b

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			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
493385	Lynwood Road, London	LM0005	76.8	73.9	81.9	93.7	76.4	76.4	73.3	3,A,ii,b
493412	Greystoke Park Terrace, London	LM0005	76.8	73.9	81.9	93.7	76.4	76.4	73.3	3,A,ii,b
493486	Western Avenue, London	LM0004	76.8	73.2	80.4	97.6	76.8	78.2	73.5	3,A,i,a
493528	Royal Parade, London	LM0004	76.8	73.2	80.4	97.6	76.8	78.2	73.5	3,A,ii,b
493913	Cleveley Crescent, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
494076	Cleveley Crescent, London	LM7050	53.3	50.4	55.6	69.5	53.9	56.8	50.3	1,A,iii,b
494208	West Gate, London	LM0060	59.9	58.4	66.7	78.5	60.0	58.3	57.1	1,A,iii,b
494242	West Gate, London	LM0060	59.9	58.4	66.7	78.5	60.0	58.3	57.1	1,A,ii,b
494352	Western Avenue, London	LM0005	76.8	73.9	81.9	93.7	76.4	76.4	73.3	3,A,ii,b
494538	Brunswick Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
495189	Ashbourne Parade, London	LM1035	69.9	67.0	78.5	90.4	69.6	69.6	66.4	4,A,i,a
495554	Hanger Lane, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
496122	Garrick Close, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
496283	Sandall Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
496325	Brunswick Road, London	LM1302	57.2	54.2	61.5	78.8	57.4	58.8	54.3	1,A,ii,b
496439	Brunswick Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
496627	Lynwood Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b

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			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
497033	Lynwood Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
497137	Sandall Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
498902	Priory Gardens, London	London_Urban	64.0	56.0	71.1	75.0	64.0	60.0	56.0	7,A,iii,b
498973	St. Augustines Avenue, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
499178	Riverside Gardens, Wembley	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
510064	Horn Lane, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
510683	Western Avenue, London	LM1005	55.3	50.0	61.6	70.6	55.7	53.2	49.9	3,A,iii,b
511144	Court Way, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
511198	Court Way, London	LM1057	53.8	50.2	62.7	75.8	54.3	53.3	50.7	3,A,i,a
511226	Court Way, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
511625	Park View, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
511662	Park View, London	LM1057	53.8	50.2	62.7	75.8	54.3	53.3	50.7	3,A,ii,b
511682	Park View, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
511852	Balfour Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
511995	Cecil Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
512201	Western Avenue, London	LM1005	55.3	50.0	61.6	70.6	55.7	53.2	49.9	3,A,ii,b
512222	Allan Way, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b

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			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
512377	Allan Way, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
512442	Allan Way, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
512613	Allan Way, London	LM1003	74.8	67.6	78.1	82.1	75.4	72.4	67.6	4,A,iii,b
512748	Wilfrid Gardens, London	LM1209	59.0	54.1	59.0	82.6	59.6	58.2	54.1	3,A,i,a
512794	Western Avenue, London	LM1003	74.8	67.6	78.1	82.1	75.4	72.4	67.6	4,A,ii,b
512925	Canada Crescent, London	LM1209	59.0	54.1	59.0	82.6	59.6	58.2	54.1	3,A,ii,b
513012	Canada Road, London	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
513251	Highfield Road, London	LM0030	52.3	47.4	55.0	69.2	52.5	51.4	47.4	3,A,ii,b
513288	Highfield Road, London	LM0030	52.3	47.4	55.0	69.2	52.5	51.4	47.4	3,A,ii,b
517439	Western Avenue, London	LM1005	55.3	50.0	61.6	70.6	55.7	53.2	49.9	3,A,ii,b
517504	Canada Crescent, London	LM1003	74.8	67.6	78.1	82.1	75.4	72.4	67.6	4,A,iii,b
517553	Lucy Crescent, London	LM1003	74.8	67.6	78.1	82.1	75.4	72.4	67.6	4,A,ii,b
549409	Carr Road, Northolt	LM0012	57.2	48.3	56.9	68.4	58.0	54.7	48.3	3,A,ii,b
700420	West Gate, London	LM0060	59.9	58.4	66.7	78.5	60.0	58.3	57.1	1,A,iii,b
700471	Summit Road, Northolt	LM0054	49.1	45.5	53.3	80.3	49.2	49.4	44.2	1,A,i,a
700472	Woodhouse Close, Perivale	LM1207	52.6	47.8	54.7	69.6	52.6	51.4	47.7	1,A,i,a

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ³ or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps ⁴ , etc.)
7	Generic levels

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

³ Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

⁴ Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; accessed 26 July 2013.

3.3 Future baseline methodology

Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.
- 3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline (2026), compared to existing baseline (2012), is likely to materially affect the operational sound assessment.

4 References

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.